

CLAIMS

What is claimed is:

1. A signal processing unit for a digital TV system, comprising:
 - a first device which acts on a video signal with graphical picture elements and text characters to produce a first device output video signal;
 - a second device which converts a frame rate of the first device output video signal to produce an increased frame rate video signal; and
 - a driver stage which drives a display responsive to the increased frame rate video signal.
2. The signal processing unit of Claim 1, further comprising:
 - a picture storage device connected to the first and second devices for storing picture data.
3. The signal processing unit of Claim 2, wherein the second device increases the frame rate of the first device output video signal by retrieving a preceding picture stored in the picture storage device and reproducing said preceding picture.
4. The signal processing unit of Claim 2, wherein the second device varies the frame rate by retrieving an intermediate picture stored in the picture storage device and reproducing said intermediate picture, the intermediate picture calculated by motion evaluation and picture interpolation using preceding pictures.
5. The signal processing unit of Claim 2, wherein the second device freely varies the picture format by retrieving pixel intermediate values stored in the picture

storage device, and reproducing the pixel intermediate values, the pixel intermediate values calculated by motion evaluation and pixel interpolation based on preceding pictures.

- 5 6. The signal processing unit of Claim 2, wherein the second device converts a picture scan mode of the incoming video signal from interlaced to progressive scan by retrieving intermediate pictures stored in the picture storage device and reproducing the intermediate pictures, the intermediate pictures calculated by motion evaluation and picture interpolation based on preceding pictures.
- 10 7. The signal processing unit of Claim 1, further comprising:
at least one input stage for receiving compressed picture data from at least one transmission medium; and
at least one decoding unit for converting the picture data into digital pixel data of an overall data stream which is fed to the first device.
- 15 8. A method for processing a digital TV system signal, comprising:
acting on an input video signal with graphical picture elements and text characters to produce a processed video signal;
increasing the frame rate of the processed video signal to produce an increased frame rate video signal; and
driving a display responsive to the increased frame rate video signal.
- 20 9. The method of Claim 8, further comprising:
storing pictures during processing.
10. The method of Claim 9, wherein increasing the frame rate of the processed video signal comprises:
retrieving a stored preceding picture; and

reproducing said preceding picture.

11. The method of Claim 9, wherein the frame rate is varied by retrieving a stored intermediate picture and reproducing said intermediate picture, the intermediate picture calculated by motion evaluation and picture interpolation using
5 preceding pictures.
12. The method of Claim 9, wherein picture format is varied by retrieving stored pixel intermediate values, and reproducing the pixel intermediate values, the pixel intermediate values calculated by motion evaluation and pixel interpolation based on preceding pictures.
- 10 13. The method of Claim 9, wherein a picture scan mode of the input video signal is converted from interlaced to progressive scan by retrieving intermediate pictures stored in the picture storage device and reproducing the intermediate pictures, the intermediate pictures calculated by motion evaluation and picture interpolation based on preceding pictures.
- 15 14. The method of Claim 8, further comprising:
receiving, in at least one input stage, compressed picture data from at least one transmission medium; and
converting, at least one decoding unit, the picture data into digital pixel data of an overall data stream to form the input video signal.